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OE REAR SHOCK SPRING SET INSTALLATION

#OERRSPG - 05/15/2006

NOTE: The installation of the Works Performance multi-rate springs requires the use of specific tools, some of which can be hazardous to the user if misused. If you do not have access to the proper tools and/or understand how to use them safely, do not attempt to install the springs. Take the shocks to a qualified shop or send them to Works Performance to be installed.

THE PARTS INCLUDED

Dual- and single-rate kits are available. Each of the kits is based on the rider weight, intended use (trail, MX etc.) and for stock or extended arms. As a result the parts will vary from kit to kit. In the kit is a diagram of the spring set. It will tell you which parts are included in the kit and their location. Refer to the diagram while you read this guide and begin the installation.

DUAL-RATE KITS

The Dual-rate kits will include: one initial short spring; and a main spring; two pre-load spacer rings; as well as a spring separator ("go-between"). The kit can also include one or more rings ("cross-overs"). These rings are used to transition the set from two springs to one spring during the stroke of the shock. These crossovers should not be omitted or placed inside the wrong spring, as the correct function of the set will be compromised. Please refer to the diagram in the kit for how many crossovers you will need and where they go in the assembly.



Fig. 1-- Works dual- and single-rate springs are designed to fit your weight, riding type and arm configuration.



Fig. 2-- The dual-rate spring sets may vary depending on the model, rider weight, intended use, stock or modified arms, etc. Please refer to the diagram included in the kit for the parts that are specific to your vehicle.

Continued on next page.

INSTALLATION

1. Remove the stock shock, and reduce the pre-load on the spring by unscrewing the pre-load rings at the top of the shock body.
2. Place a bearing press on the lower end of the spring so that it is between the retainer and the spring. Make sure that the press has full purchase on the spring.
3. Put the shock in the hydraulic press with the shaft pointing down (Fig.3). Allow enough upward movement of the ram so that all of the pre-loaded spring can be accommodated.
4. Slowly pump the ram down on top of the shock eye so that the clevis on the end will be pushed out of the retainer about one inch. Usually at this point the two keeper halves will fall out, but they may have to be pried. Use a screwdriver or other tool that will keep your fingers away from the area between the clevis and the retainer.
5. With the split retainers out of the assembly, release the ram slowly to let the spring go to full extension. Make sure that the clevis does not snag on the edge of the plastic sleeve or on the bearing press. Remove the shock and spring from the press.
6. Remove the metal retainer, plastic sleeve and spring from the shock.

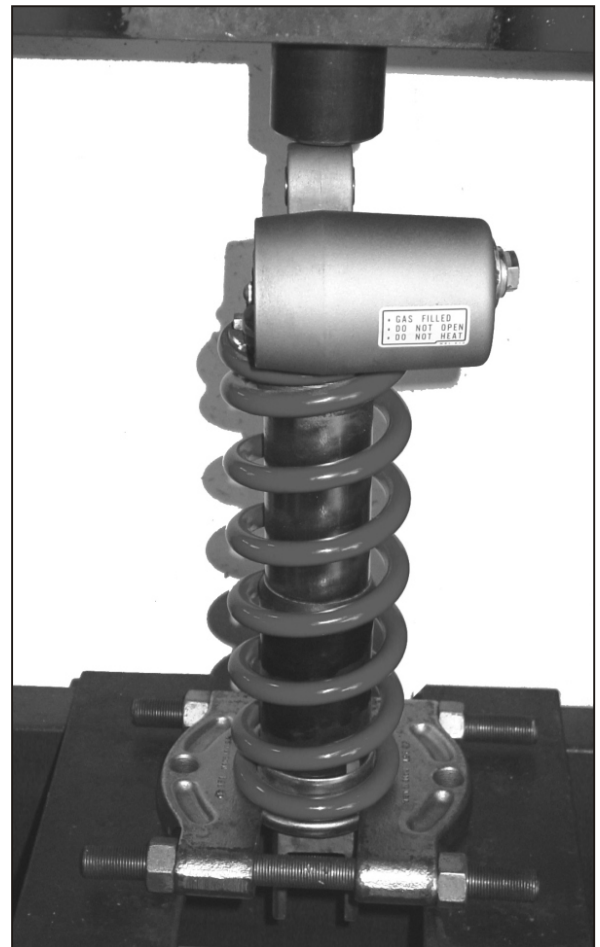
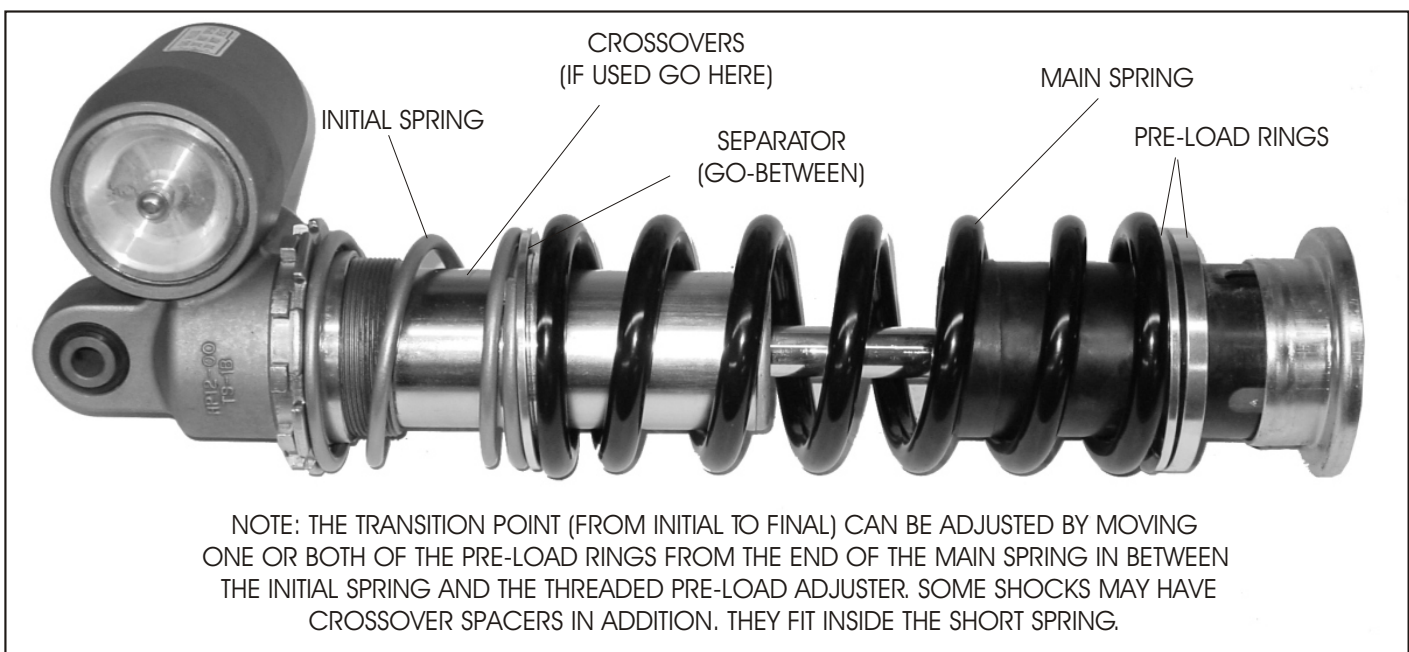


Fig. 3-- Run the ram down on the end of the body eye to push the shaft end clevis through the split retainers, allowing the retainers to be removed.



NOTE: THE TRANSITION POINT (FROM INITIAL TO FINAL) CAN BE ADJUSTED BY MOVING ONE OR BOTH OF THE PRE-LOAD RINGS FROM THE END OF THE MAIN SPRING IN BETWEEN THE INITIAL SPRING AND THE THREADED PRE-LOAD ADJUSTER. SOME SHOCKS MAY HAVE CROSSOVER SPACERS IN ADDITION. THEY FIT INSIDE THE SHORT SPRING.

Fig. 4

Continued on next page.

NOTE: The kits vary in the parts that are used based on the rider weight, intended use, extended or stock arms, etc. As a result not all kits will have all of the same parts shown here. Besides different rate springs, the parts that vary will be the rings that fit inside the small spring. In some cases there may be none in the assembly, or as many as two. Refer to the diagram in the kit for which parts go where and which parts are included with your kit.



Fig. 5– The dual-rate spring sets may vary depending on the model, rider weight, intended use, stock or modified arms, etc. Please refer to the diagram included in the kit for the parts that are specific to your vehicle.

7. With the shock eye in a vise (not the shock body or reservoir) make sure that the notch and tab on the pre-load collar line-up. Install the ring or rings (as indicated on the diagram) on the shock tube and slide it--or them-- against the spring collar (Fig. 4).

8. Follow the cross-over ring with the initial spring.

9. Then install the “go-between.” the aluminum spring separator.

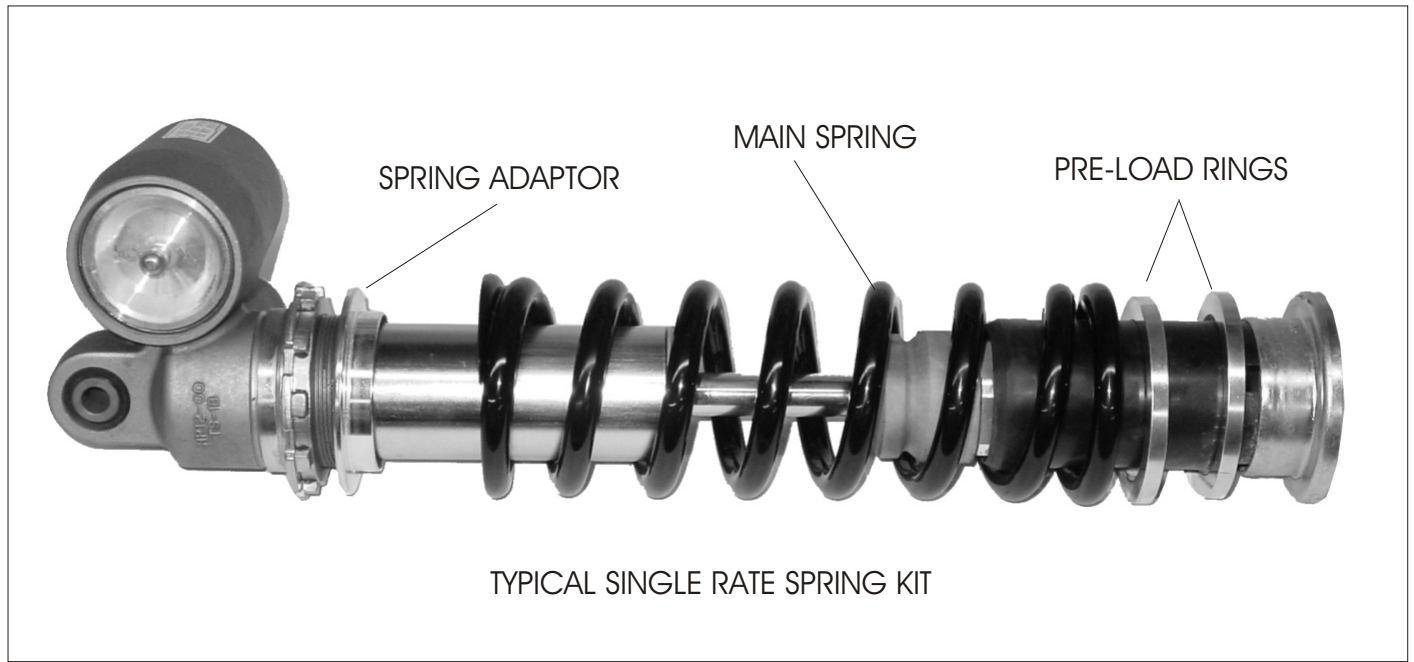


Fig. 6

10. Install the main spring followed by the pre-load ring (s), and the metal and plastic retainer/guide assembly. Use the bearing press and install it in the reverse order of disassembly,

CAUTION: When loading the springs with the press, if the retainer gets hung so that the spring doesn't fit into place **DO NOT TRY TO SEAT THE SPRING WITH YOUR HANDS. IT CAN BITE YOU IN AN INSTANT.** Simply, smack the spring with a dead-blow hammer or a rubber mallet and it will pop into place.

TUNING THE DUAL-RATE

The point at which the small spring locks out determines when the shock goes from the initial to the final rate. If you installed the pre-load rings on top of the main spring, then the set is at the soonest transition setting. That means that it will get stiffer sooner in this position. To delay the transition, move one or both of the pre-load rings in between the short spring and the threaded pre-load nut. This will move the spring separator further away from the threaded collar and the spring set will transition later-- or in effect, stay softer, longer.

SINGLE RATE SPRING KIT

Installation of the single-rate spring set is nearly identical to the dual-rate, except that there is only the main spring, pre-load rings and in some cases an adaptor sleeve to fit the threaded pre-load collar. Verify the parts used in the kit on the diagram included (Fig 5 and Fig 6).

For stock spring removal and installation, see the previous section on the dual-rate spring sets.